

**Notice of Allowability**

Application No.

10/023,712

Examiner

Qutub Ghulamali

Applicant(s)

MATSUOKA ET AL.

Art Unit

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 2/21/2006.
2. ☒ The allowed claim(s) is/are 20-24, which are now renumbered as claims 1-5 respectively.
3. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☒ All b) ☐ Some\* c) ☐ None of the:
    1. ☒ Certified copies of the priority documents have been received.
    2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
    3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413), Paper No./Mail Date \_\_\_\_\_.
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

  
**JEAN B. CORRIELLUS**  
**PRIMARY EXAMINER**

5-22-06

## **DETAILED ACTION**

### ***Acknowledgment***

1. This Office Action is responsive to the Amendment filed on 02/21/2006.

### ***Response to Arguments/Amendment***

2. Applicant's amendment/arguments filed February 21, 2006, canceling claims 1-19 and presenting new claims 20-24, have been fully considered and as a result claims 20-24 are now indicated allowable. However, because of some minor informality with the claims, an examiners amendment was considered necessary to advance the prosecution in the case.

## **EXAMINER'S AMENDMENT**

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Remus F. Fetea on 5/22/2006.

4. The application has been amended as follows:

IN THE CLAIM(s):

Claim 20, lines 20 and 22, after "a plurality of weighting units which are connected to said" and after "the output signals of said" -- plurality of -- has been inserted respectively.

***Reason for Allowance***

5. Applicant's remarks/arguments see pages 5-6, filed February 21, 2006, with respect to rejection of claims 1-19, dated 8/18/2005, have been fully considered and as a result of reconsideration, claims 20-24, are now allowed. The applicant has canceled claims 1-19.

6. Claims 20-24 allowed.

7. The following is an examiner's statement of reasons for allowance:

With reference to claim 20, the prior art of record in combination with other claimed limitations considered as a whole neither teaches nor explicitly disclose, a receiver apparatus antenna diversity comprising:  
an antenna weight calculation unit which is connected to said Fourier transformation sections and said pilot extraction unit and configured to calculate an antenna weight of each antenna elements corresponding to each of sub-carrier groups by the use of the signals carried on said pilot sub-carriers as extracted by pilot signal extraction unit, each sub-carrier group a plurality of the sub-carriers whose center frequencies are located in the vicinity of the center frequency of one of pilot sub-carrier and a timing controlling unit which is connected to said pilot signal extraction unit and said antenna weight calculation unit and configured to supply timing signals to said pilot signal extraction unit

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and said antenna weight group calculation unit in order that said antenna weight of each antenna elements is switched for each said sub-carrier group in a cyclic manner.

Such limitations as recited in the independent claim are neither anticipated nor rendered obvious by the prior art of record.

Claims 21-24, are allowed by virtue of their dependency to claim highlighted above.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Contact Information***

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qutub Ghulamali whose telephone number is (571) 272-3014. The examiner can normally be reached on Monday-Friday, 7:00AM - 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mohammad Ghayour can be reached on (571) 272-3021. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QG.  
May 22, 2006.

  
JEAN B. CORRIELUS  
PRIMARY EXAMINER  
5.22.06